

Listing of Claims

This listing of claims shall replace all prior versions and listings of claims in this application.

Claims 1-5 (Cancelled).

6. (New) A bone fusion device comprising:

- AI
- a) an implant to be inserted into bone; and
 - b) a bone-growth inducing substance on a surface of the implant, the bone-growth inducing substance comprising a copolymer containing a major amount of alkylene oxide units and a minor amount of units derived from a bioabsorbable monomer selected from the group consisting of glycolic acid, glycolide, lactic acid, lactide, p-dioxanone, trimethylene carbonate, trimethylene dimethylene carbonate, dioxepanone, alkylene oxalates, epsilon-caprolactone, and combinations thereof, said copolymer being endcapped with at least one lysine isocyanate group.

7. (New) A bone fusion device as in claim 6 wherein the implant is selected from the group consisting of fusion cages, plugs, and hip joint prostheses.

8. (New) A bone fusion device as in claim 6 wherein the isocyanate group is derived from diisocyanatolysine ethyl ester.

9. (New) A bone fusion device comprising:

- Al
- a) an implant to be inserted into bone; and
 - b) a bone-growth inducing substance on a surface of the implant, the bone-growth inducing substance comprising a composition containing a plurality of lysine-based isocyanate endcapped absorbable star polymer molecules, said absorbable star polymer molecules including repeating units derived from one or more monomers selected from the group consisting of p-dioxanone, alkylene carbonates and mixtures thereof and said plurality of star polymer molecules having at least one terminal, reactive isocyanate group and being capable of undergoing cross-linking with each other when exposed to water thereby curing to provide a solid material.

10. (New) A bone fusion device as in claim 9 wherein the implant is selected from the group consisting of fusion cages, plugs, and hip joint prosthesis.

11. (New) A bone fusion device as in claim 9 wherein the absorbable star polymer molecules include repeating units derived from dioxanone.

12. (New) A bone fusion device as in claim 11 wherein the absorbable star polymer molecules further include repeating units derived from e-caprolactone.

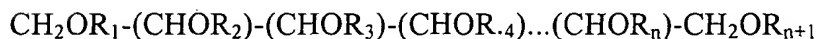
13. (New) A bone fusion device as in claim 9 wherein the absorbable star polymer molecules further include repeating units derived from alkylene carbonates.

14. (New) A bone fusion device as in claim 9 wherein the bone-growth inducing substance further comprises a filler.

15. (New) A bone fusion device as in claim 14 wherein the filler is a bioceramic.

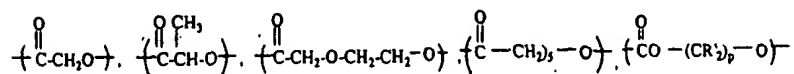
16. (New) A bone fusion device comprising:

- a) an implant to be inserted into bone; and
- b) a bone-growth inducing substance comprising a fluid composition containing a plurality of lysine-based isocyanate endcapped absorbable star polymer molecules wherein the plurality of lysine-based isocyanate endcapped absorbable star polymer molecules have the general formula:



wherein: n equals 3, 4 or 5;

$R_1, R_2 \dots R_{n+1}$ are the same or different and selected from the group of a hydrogen atom or $(Z)_m$ wherein Z can be different at each occurrence and comprises repeating units selected from the group consisting of:



and combinations thereof, wherein p is 3 to 8 and each R' may be the same or different and are individually selected from the group consisting of hydrogen and alkyl having from 1 to 5 carbon atoms, such that at least three of said $R_1, R_2 \dots R_{n+1}$ groups are other than hydrogen;

Al
m is sufficient such that the star polymer has an inherent viscosity in HFPI at 25°C between 0.05 and about 0.5 dl/gm;

the m's for each (Z) group may be the same or different; and
at least one of said $(Z)_m$ groups being endcapped with a lysine based isocyanate and containing a terminal, active isocyanate group, and wherein said plurality of star polymer molecules are capable of undergoing cross-linking with each other when exposed to water thereby curing to provide a solid material.

17. (New) A bone fusion device as in claim 16 wherein the implant is selected from the group consisting of fusion cages, plugs, and hip joint prosthesis.

18. (New) A bone fusion device as in claim 16 wherein the bone-growth inducing substance further comprises a filler.

19. (New) A bone fusion device as in claim 18 wherein the filler is a bioceramic.

20. (New) A coated surgical device comprising:

- a) a surgical article possessing a surface to be coated; and
- b) a coating comprising a copolymer containing a major amount of alkylene oxide units and a minor amount of units derived from a bioabsorbable monomer selected from the group consisting of glycolic acid, glycolide, lactic acid, lactide, p-dioxanone, trimethylene carbonate, trimethylene dimethylene carbonate, dioxepanone, alkylene oxalates, epsilon-caprolactone, and combinations thereof, said copolymer being endcapped with at least one lysine isocyanate group.

21. (New) A coated surgical device as in claim 20 wherein the surgical article is selected from the group consisting of clips, fasteners, staples, sutures, fibers, pins, screws, prosthetic devices, wound dressings, drug delivery devices, anastomosis rings and implants.

22. (New) A coated surgical device comprising:

- a) a surgical article possessing a surface to be coated; and
- b) a coating comprising a composition containing a plurality of lysine-based isocyanate endcapped absorbable star polymer molecules, said absorbable star polymer molecules including repeating units derived from one or more monomers selected from the group consisting of p-dioxanone, alkylene carbonates and mixtures thereof and said plurality of

star polymer molecules having at least one terminal, reactive isocyanate group and being capable of undergoing cross-linking with each other when exposed to water thereby curing to provide a solid material.

23. (New) A coated surgical device as in claim 22 wherein the surgical article is selected from the group consisting of clips, fasteners, staples, sutures, fibers, pins, screws, prosthetic devices, wound dressings, drug delivery devices, anastomosis rings and implants.

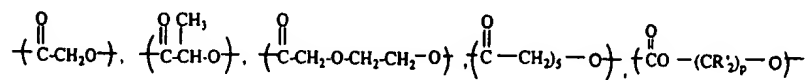
24. (New) A coated surgical device comprising:

- a) a surgical article possessing a surface to be coated; and
- b) a coating derived from a fluid composition containing a plurality of lysine-based isocyanate endcapped absorbable star polymer molecules wherein the plurality of lysine-based isocyanate endcapped absorbable star polymer molecules have the general formula:



$\text{CH}_2\text{OR}_{N+1}$, wherein: n equals 3, 4 or 5;

$\text{R}_1, \text{R}_2\dots\text{R}_{N+1}$ are the same or different and selected from the group of a hydrogen atom or $(\text{Z})_m$ wherein Z can be different at each occurrence and comprises repeating units selected from the group consisting of:



and combinations thereof, wherein p is 3 to 8 and each R' may be the same or different and are individually selected from the group consisting of hydrogen and alkyl having from 1 to 5 carbon atoms, such that at least three of said R₁, R₂...R_{n+1} groups are other than hydrogen;

m is sufficient such that the star polymer has an inherent viscosity in HFPI at 25°C between 0.05 and about 0.5 dl/gm;

AI
the m's for each (Z) group may be the same or different; and
at least one of said (Z)_m groups being endcapped with a lysine based isocyanate and containing a terminal, active isocyanate group, and wherein said plurality of star polymer molecules are capable of undergoing cross-linking with each other when exposed to water thereby curing to provide a solid material.

25. (New) A coated surgical device as in claim 24 wherein the surgical article is selected from the group consisting of clips, fasteners, staples, sutures, fibers, pins, screws, prosthetic devices, wound dressings, drug delivery devices, anastomosis rings and implants.

26. (New) A biocompatible composition comprising a branched copolymer containing a major amount of alkylene oxide units and a minor amount of units derived from a bioabsorbable monomer selected from the group consisting of glycolic acid, glycolide, lactic acid, lactide, p-dioxanone, trimethylene carbonate, trimethylene dimethylene carbonate, dioxepanone, alkylene oxalates, epsilon-caprolactone, and

Al.

combinations thereof, said copolymer being endcapped with at least one group derived from a diketene acetal.